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	AD		Joint-	H.R. Karimi and N.W. Anderson, "A Novel and Efficient Solution to Block-Based Joint-Detection using Approximate Cholesky Factorization", <i>Personal, Indoor and Mobile Communications PIMRC' 98</i> , Conference Proceedings, Vol. 3, pp. 1340-1345, Sept. 1998, Boston, MA.									
	AE			ETSI STC SMG2 Layer 1 Expert Group, "Low Cost MMSE-BLE-SD Algorithm for UTRA TDD Mode Downline", Tdoc SMG2 UMTS L1, Helsinki, Finland, Sept. 1998.									
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U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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RW	AG		Weidong Yang et al., "Fast Joint Detection with Cyclic Reduction Exploiting Displacement Structures", 2000 IEEE International Conference on Acoustics, speech, and Signal Processing, Istanbul, Turkey, 5-9 June. Proceedings (Cat. No. 00CH37100),							
	АН			akis John G., "Digital Signal Processing, Macmillan Publishing Company, New York, NY, 1992, pg. 835, para. 11.3.1, page 890, para. 12.3.2						
	AI		Mobile Radio Systems", Interna	ollmer et al., "Joint-Detection Using Fast Fourier Transforms in TD-CDMA based obile Radio Systems", International Annual Conference of ICT, 1999, pages 1-7, page 1, para. I, page 2, para. II, page 3, para III, page 4, para IV.						
	AJ		Access Scheme for UMTS Processing Advances in Wireles	Pigeonnat Y., "Alternative Solutions for Joint Detection in TD/CDMA Multiple Access Scheme for UMTS", IEEE Signal Processing Workshop on Signal Processing Advances in Wireless Communications, May 9, 1999, pages 329-332, page 329, para. 2.						
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			Minimum Mean-Square E	rror Equalizati	Kaleh and Paul Walter Baier, "Z ion for Multiuser Detection in Co lar Technology, Vol.45, No. 2, p	de-Divisio	n Multiple		SS	
	,		Naja Klein, "Data Detection Alg IEEE 47th	gorithms Speci Vehicular Tech	ially Designed for the Downlink on the hology Conference, pp. 203-20	of CDMA N 7, May 19	Mobile Rac 197.	lio Sys	stems",	

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T		5,337,226	12/1994	Davis				
	1	5,377,225	12/1994	Davis				
	•	5,477,225	12/1995	Young et al.				
		5,648,983	07/1997	Kostic et al.				
	•	6,064,689	05/2000	Vollmer et al.				
	1	2002/0126619	09/2002	De et al.				
	•	2002/0126646	09/2002	De et al.				
	•	2002/0131383	09/2002	De et al.				
	•	2002/0136160	09/2002	De et al.				
	•	2002/0141366	10/2002	De et al.				
	*	2002/0141372	10/2002	De et al.				
	•	2002/0141373	10/2002	De et al.				
	*	2002/0154599	10/2002	De et al.				
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RW				nr and Walter Konhauser editors ion Systems, Artech House, Bos				
		Minimum Mean-Square	Error Equalizat	Kaleh and Paul Walter Baier, " tion for Multiuser Detection in C ular Technology, Vol.45, No. 2,	ode-Divisio	n Multiple-	Access 96.	
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RW	Approximate Cholesky Factorization*, Person		ications PIMRC' 98, Conference				
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	Lang Tong; Guanghan xu; Kailath T: "Blind a time domain approach", IEEE Trans. Inf. 1994, USA, ISSN 00		s on Information Theory, March				
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	Yang et al., "Fast Joint Detection with Cyc International Conference on Acoustics,	clic Reduction Exploiting Displacement Structures*, 2000 IEEE Speech and Signal Processing, Istambul, Turkey, June 2000					
	Proakis et al., "Digital Signal Processing", M. 11.	acmillan Publishing Company, N 3.1, p. 890, para. 12.3.2	ew York, NY, 1992, p. 835, para.				
	Vollmer et al., "Joint-Detection Using Fast I International Annual Conference of ICT, 199	Fourier Transforms in TD-CDMA 9, pp. 1-7, p. 1, para. 1, p. 2, par	Based Mobile Radio Systems*, a. II, p. 3, para. III, p. 4, para. IV.				
\bigvee	Pigeonnat, "Alternative Solutions for Joint D Signal Processing Workshop on Signal Pro 32	etection in TD/CDMA Multiple Ad acessing Advances in Wireless C 19-332, p. 329, para. 2.	ccess Scheme for UMTS*, IEEE ommunications, May 1999, pp.				
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